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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,096	02/27/2002	Vishal Anand	US 028017	2846

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Corporate Patent Counsel
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EXAMINER	
PARK, ILWOO	

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 10/28/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/086,096	Applicant(s) ANAND ET AL.	
	Examiner Ilwoo Park	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-15 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Holden, US patent No. 5,583,861.

As to claim 1, Holden teaches a multiple-input queuing system comprising:

a buffer [col. 6, lines 18-21] that includes a plurality of memory-elements,

an allocator that is configured to allocate [col. 6, lines 1-3] a memory-element of the plurality of memory-elements for storing a data-item from a select input-stream of a plurality of input-streams, and

a mapper that is configured to: receive [col. 6, lines 63-65] a request for an output corresponding to the select input-stream, determine [col. 6, lines 57-67] an address associated with the memory-element, based on the request for the select input-stream, and provide the data-item from the memory-element as the output, based on the address associated with the memory-element.

4. As to claim 2, Holden teaches a first switch [input crosspoint 110 in fig. 5], operably coupled to the allocator, that is configured to route the data-item from the select input-stream to the memory-element.

5. As to claim 3, Holden teaches a second switch [output crosspoint 12 0 in fig. 5], operably coupled to the mapper, that is configured to route the data-item from the memory-element to the output.

6. As to claim 4, Holden teaches the allocator is further configured to allocate the memory-element based on a request from the select input-stream for an allocation [col. 2, lines 45-50].

7. As to claim 5, Holden teaches the allocator is further configured to: receive allocation requests from other input-streams of the plurality of input-streams, determine a relative priority of the allocation requests from the other input-streams and the request from the select input-stream, and identify the select input-stream, based on the relative priority [col. 2, lines 28-32].

8. As to claim 6, Holden teaches the allocator is further configured to: receive allocation requests from other input-streams of the plurality of input-streams, and allocate other memory-elements of the plurality of memory-elements for storing other data-items from the other input-streams [col. 14, lines 33-45].

9. As to claim 7, Holden teaches the allocator is configured to allocate the other memory-elements contemporaneously with allocating the memory-element for storing the data-item from the select input-stream [col. 14, lines 33-45].

10. As to claim 8, Holden teaches the mapper that is further configured to: receive requests for outputs corresponding to the other input-streams, determine addresses associated with the other memory-elements, based on the request for the other input-streams, and provide the other data-items from the other memory-element as outputs

from the multiple-input queuing system, based on the addresses associated with the other memory-element [col. 6, lines 57-67].

11. As to claim 9, Holden teaches a buffer system that is configured to receive data from a plurality of input-streams, the buffer system comprising:

a plurality of memory-elements [col. 6, lines 18-21],

a plurality of input-multiplexers [col. 6, lines 21-25], each input-multiplexer being coupled to a memory-element of the plurality of memory-elements, and

an allocator [col. 6, lines 1-3], operably coupled to the plurality of memory-elements, that is configured to couple one or more input-streams of the plurality of input-streams to corresponding one or more memory-elements, via allocation commands to the plurality of input-multiplexers [col. 6, lines 25-28].

12. As to claim 10, Holden teaches a mapper, operably coupled to the allocator, that includes:

a memory [col. 6, lines 42-46] that is configured to store information corresponding to the allocation commands, and

a multiplexer [fig. 6], operably coupled to the memory, that is configured to access the information corresponding to the allocation commands, and to thereby provide an identification of the one or more memory-elements corresponding to a select input-stream of the plurality of input-streams, and

an output-multiplexer [output crosspoint 12 0 in fig. 5], operably coupled to the plurality of memory-elements and to the mapper, that is configured to couple a select memory-element of the plurality of memory-elements to an output of the buffer system,

based on the identification of the one or more memory-elements corresponding to the select input-stream.

13. As to claim 11, Holden teaches the memory of the mapper includes a plurality of queues, each queue of the plurality of queues corresponding to each input-stream of the plurality of input-streams [col. 6, lines 42-46].

14. As to claim 12, Holden teaches a method of buffering data-items from a plurality of input-streams, including:

receiving [col. 2, lines 45-50] an input-notification from one or more input-streams of the plurality of input-streams,

allocating [col. 6, lines 1-3] a select memory-element of a plurality of memory-elements to a select input-stream of the one or more input-streams,

storing [col. 6, lines 18-21] a received data-item from the select input-stream to the select memory-element,

storing [col. 6, lines 57-67] an identification of the select memory-element corresponding to the select input-stream,

receiving [col. 6, lines 33-40] an unload request that identifies the select input-stream, and

providing [col. 14, lines 46-50] the received data-item from the select memory-element, based on an identification of the select memory-element corresponding to the select input-stream.

15. As to claim 13, Holden teaches allocating a plurality of select memory-elements of the plurality of memory-elements to a plurality of select input-streams of the one or

more input-streams, storing a received data-item from each of the plurality of select input-streams to a corresponding each of the plurality of select memory-elements, and storing an identification of each of the plurality of select memory-elements corresponding to each of the plurality of select input-streams [col. 14, lines 30-55].

16. As to claim 14, Holden teaches storing the identification of the select memory-element includes placing the identification in a first-in-first-out queue that is associated with the select input-stream, and providing the received data-item includes removing the identification from the first-in-first-out queue that is associated with the select input-stream [col. 6, lines 42-67].

17. As to claim 15, Holden teaches each memory-element of the plurality of memory-elements is dynamically classifiable as currently-used and currently-unused; allocating the select memory-element includes: identifying one of the plurality of memory-elements that is classified as currently-unused as the select memory-element, and classifying the select memory-element as currently-used; and providing the received data-item includes classifying the select memory-element as currently-unused [col. 6, lines 42-67].

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (703) 308-7811. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA, 4th Floor (Receptionist).

Ilwoo Park

Primary Examiner

October 19, 2003